REMARKS

In the non-final Office Action, the Examiner rejects claims 1, 3, 13, and 77-86 under 35 U.S.C. § 102(e) as anticipated by OPALKA et al. (U.S. Patent No. 6,259,699); objects to claims 4-11 as dependent upon a rejected base claim; and allows claims 12 and 14-26. Applicant respectfully traverses the rejection under 35 U.S.C. § 102.[1] Claims 1, 3-26, and 77-86 remain pending.

Applicant notes with appreciation the Examiner's indication that claims 12 and 14-26 are allowable over the art of record and that claims 4-11 contain allowable subject matter.

Claims 1, 3, 13, and 77-86 stand rejected under 35 U.S.C. § 102(e) as allegedly anticipated by OPALKA et al. Applicant respectfully traverses this rejection.

A proper rejection under 35 U.S.C. § 102 requires that a single reference teach every aspect of the claimed invention. Any feature not directly taught must be inherently present. In other words, the identical invention must be shown in as complete detail as contained in the claim. See M.P.E.P. § 2131. Applicant submits that OPALKA et al. does not disclose or suggest the combination of features recited in Applicant's claims 1, 3, 13, and 77-86.

Independent claim 1 is directed to a node apparatus which has a VC set between at least two adjacent node apparatuses and transfers a packet over the VC after dividing

[1] As Applicants' remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicants' silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references, etc.) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such assertions/requirements in the future.

the packet into cells. The node apparatus includes a route table, a quality description table, a plurality of output queues, and an output control section for performing read control on a packet from each output queue so as to achieve a quality set for each output queue. The output destination of an incoming packet is determined by searching the route table by using packet header information. A quality class of the packet is determined by searching the quality description table. The packet is stored in an output queue determined by the determined output destination and quality class, and the packet is read out from the output queue in accordance with the quality set for the output queue. OPALKA et al. does not disclose or suggest this combination of features.

For example, OPALKA et al. does not disclose or suggest that a packet is stored in an output queue determined by the determined output destination and quality class. The Examiner appears to rely on Fig. 14 and col. 14, lines 4-39, of OPALKA et al. for allegedly disclosing this feature of claim 1 (Office Action, pg. 2). Applicant respectfully disagrees with the Examiner's interpretation of OPALKA et al.

Fig. 14 of OPALKA et al. depicts a switch architecture. This figure depicts a buffer 12, which the Examiner appears to allege corresponds to the recited output queue (Office Action, pg. 2). Neither this figure nor the associated description discloses or suggests that a packet is stored in an output queue determined by the determined output destination and quality class, as recited in claim 1.

At col. 14, lines 4-39, OPALKA et al. discloses:

> The cells are queued up in the "NeoN Data Switch" 4 and the cell header is examined for destination interface and QoS requirements. This information is passed on to the egress interface QoS module 6 via a Control Data Switch, so-labeled at 8, The QoS for a cell-type interface

> will simply ensure that cell rates beyond the Peak Cell Rate are clipped. The cells are then forwarded to the "Per VCI Shaping" module 10, where the cells are forwarded to the physical interface after they are shaped as per the requirements of the next hop switch. Since the QoS module 6 does not know from the control data whether a packet or a cell is involved; it simply requests the data from the NeoN Switch into the "Buffer 12." The control data informs the "Per VCI shaping" block 10 to do either header translation if it were a cell going into another VCI tunnel, and/or segmentation if the data was a packet going out on a cell interface and/or reform shaping as per the remote end requirements.
>
> Native Packets through the NeoN Switch
>
> As packets enter the interface card, the packet header is examined by a Header Lookup and Forwarding Engine module 14 while the data is sent to the NeoN data switch 4. The Ingress Forwarding Engine makes a forwarding decision about the QoS and the destination interface card based on the incoming packet header. The Forwarding Engine 14 also gathers all information regarding the data packet, like NeoN Switch address, Packet QoS, Egress Header Translation information, and sends it across to the egress interface card. This information is carried as a control packet to the egress port through the small non-blocking control data switch 8 to the Egress QoS module 6, which will queue data as per the control packet and send it to the module listed PHY at the egress. If the packet were to egress to a cell interface, the packet will be segmented, then header translated and shaped before it leaves the interface.
>
> Advantages of the NeoN Switch Architecture of the Invention

This section of OPALKA et al. discloses that since QoS module 6 does not know from the control data whether a packet or a cell is involved, QoS module 6 requests the data from NeoN Switch 4 into Buffer 12 (which the Examiner alleges corresponds to the recited output queue). Applicant submits that OPALKA et al. does not disclose or suggest that a packet is stored in buffer 12 determined by the determined output destination and quality class, as would be required by the Examiner's interpretation of claim 1.

The Examiner has not pointed to any section of OPALKA et al. that discloses or suggests a packet being stored in buffer 12 (or any other component in OPALKA et al. that could reasonably be construed as an output queue) determined by the determined output destination and quality class. Thus, a proper case of anticipation has not been established with respect to claim 1.

For at least the foregoing reasons, Applicant submits that claim 1 is not anticipated by OPALKA et al.

Independent claim 3 is directed to a node apparatus which has a VC set between node apparatuses and is configured to transfer a packet over the VC after dividing the packet into cells. The node apparatus includes a route table and a quality description table. An output destination of an incoming packet is determined by searching the route table by using packet header information. A quality class of the packet is determined by searching the quality description table. The packet is sent out through a VC determined by the determined output destination and quality class. A plurality of VCs with different qualities is set for the same output destination. OPALKA et al. does not disclose or suggest this combination of features.

For example, OPALKA et al. does not disclose or suggest a packet that is sent out through a VC determined by the determined output destination and quality class. The Examiner appears to rely on Fig. 14 and col. 14, lines 4-39, of OPALKA et al. for allegedly disclosing this feature of claim 3 (Office Action, pg. 2). Applicant respectfully disagrees with the Examiner's interpretation of OPALKA et al.

Fig. 14 of OPALKA et al. depicts a switch architecture. Neither this figure nor the description thereof discloses or suggests a packet that is sent out through a VC determined by the determined output destination and quality class, as recited in claim 3.

Col. 14, lines 4-39, of OPALKA et al. is reproduced above. This section of OPALKA et al. discloses a "Per VCI Shaping" module 10 that shapes cells according to requirements of a next hop switch and forwards the shaped cells to the physical interface. Applicant submits that OPALKA et al. does not disclose or suggest a packet that is sent out through a VC determined by the determined output destination and quality class, as recited in claim 3.

OPALKA et al. does not further disclose or suggest a plurality of VCs with different qualities being set for the same output destination, as also recited in claim 3. The Examiner does not address this feature in the Office Action. Accordingly, a proper case of anticipation has not been established with respect to claim 3. Applicant respectfully requests that the Examiner specifically address this feature or withdraw the rejection.

For at least the foregoing reasons, Applicant submits that claim 3 is not anticipated by SUBBIAH et al.

Independent claim 13 is directed to a node apparatus which has a plurality of VCs with different qualities set between the node apparatus and another adjacent node apparatus and transfers a packet over the VC. The node apparatus includes a plurality of output queues for which predetermined qualities are respectively set; an output table in which in correspondence with a destination address of a packet and a predetermined type

of information in a packet header, an output queue in which a packet having the destination address and the predetermined information are to be stored and an output VC to which the packet in said output queue is to be output are defined; a header processing section for determining an output queue in which the packet is stored and an output VC by searching the output table by using the destination address and the predetermined information in a header of an incoming packet; and an output control section for reading out a packet from each of the output queues so as to achieve a quality set for each of the output queues, and outputting the packet to the determined output VC. OPALKA et al. does not disclose or suggest this combination of features.

For example, OPALKA et al. does not disclose or suggest a header processing section for determining an output queue in which the packet is stored and an output VC by searching the output table by using the destination address and the predetermined information in a header of an incoming packet. The Examiner does not address this feature in the Office Action. Accordingly, a proper case of anticipation has not been established with respect to claim 13.

Nonetheless, OPALKA et al. discloses that as packets are received, an ingress forwarding engine makes a forwarding decision about the QoS and the destination interface card based on the incoming packet header (col. 14, lines 22-27). OPALKA et al. does not disclose or suggest that the ingress forwarding engine (or any other component) determines an output queue in which the packet is stored and an output VC by searching the output table by using the destination address and the predetermined information in a header of an incoming packet, as recited in claim 13.

Applicant respectfully requests that the Examiner specifically point out where OPALKA et al. discloses this feature or withdraw the rejection.

For at least the foregoing reasons, Applicant submits that claim 13 is not anticipated by OPALKA et al.

Independent claims 77 and 83 recite features similar to (yet possibly of different scope than) features described above with respect to claim 1. Therefore, Applicant submits that claims 77 and 83 are not anticipated by OPALKA et al. for at least reasons similar to reasons given above with respect to claim 1.

Claims 78-82 depend from claim 77. Therefore, these claims are not anticipated by OPALKA et al. for at least the reasons given above with respect to claim 77.[2]

Claims 84-86 depend from claim 83. Therefore, these claims are not anticipated by OPALKA et al. for at least the reasons given above with respect to claim 83.

In view of the foregoing amendment and remarks, Applicant respectfully requests the Examiner's reconsideration of the application and the timely allowance of the present claims.

[2] As Applicants' remarks with respect to the base independent claims are sufficient to overcome the Examiner's rejections of all claims dependent therefrom, Applicants' silence as to the Examiner's assertions with respect to dependent claims is not a concession by Applicants to the Examiner's assertions as to these claims, and Applicants reserve the right to analyze and dispute such assertions in the future.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

HARRITY SNYDER, L.L.P.

By: /John E. Harrity/
John E. Harrity
Registration No. 43,367

11350 Random Hills Road
Suite 600
Fairfax, Virginia 22030
(571) 432-0800
Customer Number: 44987
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